

What is claimed:

1. A method of identifying at least one exceptional managed system amongst a set of comparable managed systems,
5 each managed system having a number of system configuration attributes, the method comprising:

selecting a set of managed systems;

selecting a set of parameterizations relating to the managed systems;

10 determining a pattern for each of the parameterizations based on the system configuration attributes;

comparing substantially each of the managed systems to substantially each of the patterns; and

15 isolating a managed system based on the comparing; wherein the patterns are determined by a supervised machine learning algorithm.

2. The method of claim 1, wherein the managed systems are
20 computer systems.

3. The method of claim 2, wherein the system configuration attributes include at least one of the following:

25 operating system patches;
active processes;
installed application software programs;
memory configuration; and
peripheral devices.

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4. The method of claim 1, wherein selecting of the set of managed systems includes classification of the systems in accordance with a system attribute.
- 5 5. The method according to claim 1, further comprising allocating a resource to any system that has been isolated.
6. The method according to claim 1, wherein the set of parameterizations includes at least one parameterization
10 relating to operating system patches.
7. The method according to claim 5, wherein the set of parameterizations includes at least one parameterization relating to operating patches and the step of allocating a
15 resource to the system includes an analysis of whether at least one operating patch should be installed or removed from a system.
8. The method according to claim 1, further comprising
20 assigning a priority value to an isolated system.
9. The method according to claim 8, further comprising compiling a list of isolated systems and ordering the isolated systems in accordance with their priority values.
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10. The method according to claim 8, further comprising allocating a resource in accordance with priority values.
11. The method according to claim 1, wherein the
30 supervised machine learning algorithm is a rule learning algorithm.

12. A method according to claim 1, further comprising annotating an isolated system with a measure indicative of the results of the comparing, wherein the measure is based on at least one of the following:

- 5 an extent of deviation from a pattern;
- a degree of support for a pattern;
- a confidence level of a pattern;
- an assessment of the significance of a pattern; or
- a cumulative number of patterns from which the system
- 10 deviates.

13. A method according to claim 12, further comprising compiling a list of isolated systems ordered in accordance with said measures.

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14. A system for identifying exceptional managed systems amongst comparable managed systems, each managed system having a number of system configuration attributes, the system comprising:

- 20 a selection component that selects a set of managed systems;
- a supervised machine learning algorithm that determines patterns for a set of parameterizations representing constraints on the system configuration
- 25 attributes for the selected set of managed systems;
- a comparison component that compares the managed systems to the patterns; and
- an isolating component that isolates the managed systems that deviate from the patterns as exceptional
- 30 managed systems.

15. The system of claim 14, wherein the selection component classifies the set of managed systems in accordance with a system attribute.

5 16. The system according to claim 14, further comprising an allocation component that allocates a resource to the systems that have been isolated.

10 17. The system according to claim 14, wherein the set of parameterizations includes at least one parameterization relating to operating system patches.

15 18. The system according to claim 16, wherein the set of parameterizations includes at least one parameterization relating to operating patches and the allocation component conducts an analysis of whether at least one operating patch should be installed or removed from a system.

20 19. The system according to claim 14, further comprising a prioritization component that assigns priority values to the isolated systems, compiles a list of isolated systems, and orders the isolated systems in accordance with their priority values.

25 20. The system according to claim 14, wherein the supervised machine learning algorithm is a rule learning algorithm.

30 21. The system according to claim 14, further comprising an annotation component that annotates the isolated systems with a measure that indicates the extent to which each isolated system deviates from the patterns.

22. A system for identifying exceptional managed systems amongst comparable managed systems, each managed system
5 having a number of system configuration attributes, the system comprising:

means for selecting a set of managed systems;

means for determining patterns for a set of
parameterizations representing constraints on the system
10 configuration attributes for the selected set of managed systems, according to a supervised machine learning algorithm;

means for comparing the managed systems to the patterns; and

15 means for isolating managed systems that deviate from the patterns as exceptional managed systems.

23. Computer data storage media having programmed thereon computer software which performs the following functions:

20 selecting a set of managed systems, each managed system having a number of system configuration attributes;

selecting a set of parameterizations relating to the managed systems;

determining a pattern for each of the
25 parameterizations based on the system configuration attributes;

comparing substantially each of the managed systems to substantially each of the patterns; and

isolating an exceptional managed system based on the
30 comparing;

wherein the patterns are determined by a supervised machine learning algorithm.